AMENDMENTS TO THE SPECIFICATION

In the specification of the Application, please amend paragraph 0012 as hereinafter indicated.

> [0012] Another advantage that is provided by an embodiment of the present invention is the provision of a vehicle safety system that shares safety system components between vehicle headlight operations and other safety ~~systems~~ system operations. In so doing, the present invention, for at least the stated embodiment, minimizes system complexity and also both manufacturing time and costs ~~involved therein~~ associated therewith.

Please also amend paragraph 0014 in the specification as hereinafter indicated.

> [0014] The present invention itself, together with attendant advantages, ~~will be~~ is best understood by reference to the following detailed description, when taken in conjunction with the accompanying drawing figures.

Please also amend paragraph 0015 in the specification as hereinafter indicated.

> [0015] For a more complete understanding of ~~this~~ the invention, reference should [[now]] be made to the embodiments illustrated in ~~greater~~ detail in the accompanying drawing figures, and also described below by way of examples of the invention ~~wherein~~[[:]].

Please also amend paragraph 0020 in the specification as hereinafter indicated.

> [0020] Figure 5 shows another sample beam illumination pattern for the host vehicle that has been adjusted in response to a laterally located target vehicle in accordance with an embodiment of the present invention[[;]] [[and]].

Please also amend paragraph 0022 in the specification as hereinafter indicated.

> [0022] In the ~~following~~ drawing figures discussed as follows, the same reference numerals will generally be used to refer to the same components. The present invention may be adapted and applied to various sensing systems including[[:]], for example, headlight systems, collision warning systems, collision avoidance systems, parking-aid systems, reversing-aid systems, passive countermeasure systems, adaptive cruise control systems, lane

departure systems, lane-keeping systems, windshield clearing systems, or other systems known in the art.

Please also amend paragraph 0028 in the specification as hereinafter indicated.

[0028] The lighting circuit 14, although shown as having a single light source 32, a single beam-forming optic assembly 34 with a single light processor 36, and a pair of light emitters 38, may have any number of these devices. Also, each of these devices may be separate stand-alone devices[[,]] as shown, or may be integrated into a single unit, or some combination thereof. The light source 32 is optically coupled to the beam-forming assembly 34 by way of a first optical coupling 40. The beam-forming assembly 34 is coupled to the emitters 38 by way of a second optical coupling 42. Optical couplings 40 and 42 may be in the form of fiber optic cables, multiple optic lenses or mirrors, or other optical couplings known in the art. In operation, light is generated by the light source 32, formed into a beam having a selected beam pattern by the beam-forming assembly 34, and ultimately emitted through the emitters 38 to illuminate the illumination zone 20.

Please also amend paragraph 0031 in the specification as hereinafter indicated.

[0031] The emitters 38, in the embodiment as shown, include a driver side emitter 47 and a passenger side emitter 48. The emitters 38 may include, for example, ~~lense~~ lens elements for conveying the preconditioned light into the illumination zone 20. In this way, the emitters 38 are stationary with respect to the vehicle 12 and do not include a light source or any moveable parts for the modification of a beam pattern. In the described embodiment of Figure 1, the emitters 38 precondition light received from the beam-forming assembly 34. The emitters 38 may be in the form of headlights, taillights, indicators, infrared or laser transmitters, or may be in the form of some other illumination source known in the art.

Please also amend paragraph 0032 in the specification as hereinafter indicated.

[0032] The lighting circuit 14 may also include a pulse generator 49. The pulse generator 49 is coupled to the controller 18 and to the light source 32. The pulse generator 49 is used in ~~communication~~ communicating with a detected object via the lighting circuit 14, the transponder 22, or a combination thereof.

Please also amend paragraph 0035 in the specification as hereinafter indicated.

[0035] The sensor 16 may be of various types and styles known in the art. The sensor 16 may be in the form of an RF, visible light, laser, or infrared transceiver or receiver, or may be in some other form known in the art. The sensor 16 may also be located anywhere on the vehicle 12. The vision sensor 16 may be a camera, a charged-coupled device, an infrared detector, a series of photodiodes, or other sensor known in the art. The controller 18 and the processor 36 may be microprocessor-based, such as a computer having a central processing unit, memory (RAM and/or ROM), and associated input and output buses. The controller 18 and the processor 36 may be application-specific integrated circuits or be formed of other logic devices known in the art. The controller 18 and the processor 36 may be portions of a central vehicle main control unit, an interactive vehicle dynamics module, a restraints control module, a main safety controller, or may be stand-alone controllers and processors[[,]] as shown. The controller 18 and the processor 36 may be in direct communication with any of the above-stated components, or may communicate with each component by way of the vehicle communications bus 30, as shown with respect to the vehicle sensors 26.

Please also amend paragraph 0037 in the specification as hereinafter indicated.

[0037] Adaptive cruise control is used for monitoring objects forward of the vehicle 12 and for maintaining a safe predetermined distance away from the detected objects to prevent collision therewith. When adaptive cruise control is active, the controller 18 may warn the vehicle operator of an impending object or perform a countermeasure so as to alter the speed of travel of the vehicle 12.

Please also amend paragraph 0045 in the specification as hereinafter indicated.

[0045] The navigational system 28 may include global positioning system (GPS) data, differential GPS data, or carrier phase differential GPS data, as well as navigational roadway data. The navigational system 28 provides navigational data to the controller 18 for the selection of the appropriate beam pattern. The navigational data may include digital navigational map data. The navigational map data can be used to provide road segment classification and intersection determination data including elevation changes in the road surface, which can further be used in selecting or modifying a beam pattern. In addition, when the GPS information is not available or is sporadic due to buildings or atmospheric ~~affects~~ effects, an inertial guidance system can be

used to provide sub-second geospatial reckoning to the controller 18 with knowledge of the vehicle location and heading information.

Please also amend paragraph 0046 in the specification as hereinafter indicated.

[0046] The bus 30 may also be of various types and styles. The bus 30 may be in the form of a car area network bus, a series control panel bus, a universal asynchronous receiver/transmitter based protocol bus, or other bus known in the art. Although the bus 30 is shown in Figure 1 as merely providing communication between the controller 18 and the vehicle sensors 26, it may also provide communication between any of the above-mentioned components.

Please also amend paragraph 0047 in the specification as hereinafter indicated.

[0047] Referring now to Figures 2-5, ~~which~~ the drawings therein show various beam illumination patterns [[for]] emitted by the host vehicle 12 when utilizing the adaptive system 10 ~~and adjusting~~ to thereby adjust a beam pattern in response to one or more target vehicles in proximity with the host vehicle 12, in accordance with multiple embodiments of the present invention.

Please also amend paragraph 0048 in the specification as hereinafter indicated.

[0048] Figure 2 is an illustrative example of when the host vehicle 12 is being approached by a forward on-coming target vehicle 50. The controller 18 and the processor 36, in response to [[the]] detection of or [[the]] communication with the target vehicle 50, select a beam pattern and adjust emission of that beam pattern so as to not emit light, or at least minimize ~~light~~ the emission of such light, in the direction of the target vehicle 50. By minimizing light emission in the direction of the target vehicle 50, the controller 18 and the processor 36 minimize light scattering from side and rear view mirrors. The controller 18 and/or processor 36 signals the driver side emitter 47 to ~~angle downward~~ emit light ~~emission therefrom~~ at a downward angle. Thus, the emitters 38 may be positioned at different angles depending upon detection of an object and the relative location of that object.

Please also amend paragraph 0050 in the specification as hereinafter indicated.

[0050] Figure 4 is an illustrative example of when the host vehicle 12 is being approached by a lateral on-coming target vehicle 54. The beam pattern 56 is adjusted as the target vehicle 54 passes in front of the host vehicle 12. For example, the driver side emitter

47 may be initially ~~angle~~ angled downward and gradually angled upward as the target vehicle 54 passes. The passenger side emitter 48 may be angled upward, gradually angled downward, and back upward as the target vehicle 54 passes.

Please also amend paragraph 0055 in the specification as hereinafter indicated.

[0055] In step 102, the system 10 may transmit a first communication signal to objects that are proximate to the vehicle 12. The system [[12]] 10 may transmit the communication signal via the lighting system 14, the transponder [[44]] 22, or a combination thereof.

Please also amend paragraph 0060 in the specification as hereinafter indicated.

[0060] The above-described steps are meant to be illustrative examples and may be easily modified depending upon [[the]] an intended application. Furthermore, [[The]] the steps may be performed sequentially, synchronously, simultaneously, or in a different order depending upon the application.

Please also amend paragraph 0061 in the specification as hereinafter indicated.

[0061] The present invention provides an adaptive vehicle communication controlled lighting system that allows for multiple beam patterns to be selected from in response to communication between a host vehicle and an object. The present invention also allows transmitters and receivers to be shared between a vehicle lighting system and other vehicle safety systems, ~~thus~~[[,]] thereby minimizing vehicle components and system complexity. The present invention further provides a symmetric and continuous lighting pattern, as well as a programmable lighting pattern that can vary dynamically in response to environmental conditions experienced by a host vehicle.

Lastly, please also amend paragraph 0062 in the specification as hereinafter indicated.

[0062] While the invention has been described in ~~connection~~ association with one or more embodiments, it is to be understood that the specific mechanisms and techniques which have been described herein are merely illustrative of the principles of the invention, and numerous modifications may be made to the methods and apparatus described herein without departing from the spirit and scope of the invention as defined by the appended claims.